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10/763,585	01/23/2004	Luis Felipe Cabrera	13768.474	7734

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EXAMINER

MEHRMANESH, ELMIRA

ART UNIT	PAPER NUMBER
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2113

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/763,585	CABRERA ET AL.	
	Examiner	Art Unit	
	Elmira Mehrmanesh	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to an amendment filed on October 31, 2006 for the application of Cabrera et al., for a "Selectable data field consistency checking" filed January 23, 2004.

Claims 1-40 are pending in the application.

Claims 1-40 are rejected under 35 USC § 103.

Claims 1, 17, 25, 26, 32, and 35 have been amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 12-18, and 22-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koizumi et al. (U.S. Patent No. 4,789,986) in view of McElroy et al. (U.S. Patent No. 6,374,364).

As per claim 1, Koizumi discloses in a computing system that includes one or more processors (Fig. 1), and a system memory (Fig. 2, element 405), wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module (Fig. 2, element 403), a method for the system consistency management module to selectively performing consistency checking, the method comprising the following

- an act of identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking, the plurality of data fields (Figs. 4, 5, 6) representing less than all of the state information corresponding to the instance (Fig. 10a, element 1011)

- an act of the consistency management module determining that the prompting event has occurred (Fig. 10b, element 1027)

- and in response to determining that the prompting event has occurred, an act of performing the consistency checking on the plurality of data fields of state information (Fig. 10b, element 1026).

Koizumi fails to explicitly disclose selectively identifying data fields by the application instance or the consistency management module.

McElroy teaches:

Wherein the selective identification of the data fields to be consistency checked is performed by one of the application instance or the consistency management module (col. 5, lines 33-59).

It would have been obvious to one of ordinary skill in the art at the time the invention to use the method for checking consistency of distributed data of Koizumi et al. in combination with the fault tolerant computing system of McElroy et al. to detect data inconsistencies.

One of ordinary skill in the art at the time the invention would have been motivated to make the combination because Koizumi et al. discloses a method for checking consistency of distributed data by detecting and eliminating inconsistent data in a system (Fig. 2). McElroy et al discloses verification of data through a data selection system (col. 4, lines 16-26).

As per claim 2, Koizumi discloses an act of determining that the plurality of data fields contains at least one inconsistency identified during the consistency checking performance (Fig. 10b, element 1027)

and in response to the determination that the plurality of data fields contains at least one inconsistency comprises an act of setting the state information of the instance to reflect that the instance is in recovery mode (Fig. 10b, element 1025).

As per claim 12, Koizumi discloses the event is the loading of the state information for the instance from persistent media to system memory (Fig. 10a).

As per claim 13, Koizumi discloses the event is the saving of the state information for the instance to the persistent media (Fig. 7).

As per claim 14, Koizumi discloses the event is the backing up of the state information (Fig. 10b).

As per claim 15, Koizumi discloses the event is the occurrence of a specific time (Fig. 10b).

As per claim 16, Koizumi discloses the event is the passage of a specific amount of time since consistency checking was last performed (Fig. 10b).

As per claim 17, Koizumi discloses computer program product comprising one or more computer readable storage media storing computer executable instructions for implementing the method recited in claim 1 (Fig. 1).

As per claim 18, Koizumi discloses the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further performing the following:

an act of determining that the plurality of data fields contains at least one inconsistency identified during the consistency checking performance (Fig. 10b, element 1027)

and in response to the determination that the plurality of data fields contains at least one inconsistency comprises an act of setting the state information of the instance to reflect that the instance is in recovery mode (Fig. 10b, element 1025).

As per claim 22, Koizumi discloses the one or more computer-readable media comprise physical memory media (Fig. 2).

As per claim 23, Koizumi discloses the physical memory media comprises persistent media (Fig. 7).

As per claim 24, Koizumi discloses the physical memory media comprises system memory (Fig. 1).

As per claim 25, Koizumi discloses in a computing system that includes one or more processors (Fig. 1), and a system memory (Fig. 2, element 405), wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module (Fig. 2, element 403), a method for the system consistency

management module to performing consistency checking as specified by the instance of the application program, the method comprising the following

a step for determining that it is appropriate to perform consistency checking on a plurality of data fields, the plurality of data fields (Figs. 4, 5, 6) representing less than all of the state information corresponding to the instance (Fig. 10a, element 1011)

an act of identifying an event that will prompt the consistency checking by one or more of the application instance or the consistency management module; and an act of performing the consistency checking on the plurality of data fields (Figs. 4, 5, 6) of state information (Fig. 10b, element 1026).

Koizumi fails to explicitly disclose selectively identifying data fields by the application instance or the consistency management module.

McElroy teaches:

an act of selectively identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking, the plurality of data fields representing less than all of the state information corresponding to the instance (col. 4, lines 16-26).

an act of selectively identifying an event that will prompt the consistency checking by one or more of the application instance or the consistency management module (col. 5, lines 33-59).

As per claim 26, Koizumi discloses the step for determining that it is appropriate to perform consistency checking on a plurality of data fields further comprises the following:

an act of the consistency management module determining that the prompting event has occurred (Fig. 10b, element 1027).

As per claim 27, Koizumi discloses the event is the loading of the state information for the instance from persistent media to system memory (Fig. 10a).

As per claim 28, Koizumi discloses the event is the saving of the state information for the instance to the persistent media (Fig. 7).

As per claim 29, Koizumi discloses the event is the backing up of the state information (Fig. 10b).

As per claim 30, Koizumi discloses the event is the occurrence of a specific time (Fig. 10b).

As per claim 31, Koizumi discloses the event is the passage of a specific amount of time since consistency checking was last performed (Fig. 10b).

Claims 4-11, 20-21, and 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koizumi et al. (U.S. Patent No. 4,789,986) in view of McElroy et al.

(U.S. Patent No. 6,374,364) and in further view of Choquier et al. (U.S. Patent No. 5,951,694).

As per claim 4, Koizumi discloses the act of identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking (Fig. 10a, 10b) comprises the following:

Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

an act of receiving a function call (Fig. 5A, element 502a) using an Application Program Interface from the instance, the function call identifying at least implicitly the plurality of data fields (col. 12, lines 49-67).

It would have been obvious to one of ordinary skill in the art at the time the invention to use the method for checking consistency of distributed data of Koizumi et al. in combination with the service session redirection method of Choquier et al. to detect data inconsistencies.

One of ordinary skill in the art at the time the invention would have been motivated to make the combination because Koizumi et al. discloses a method for checking consistency of distributed data by detecting and eliminating inconsistent data in a system (Fig. 2). Choquier et al. discloses redundant data sets to ensure consistency between such locally-stored data sets (col. 10, lines 4-8). Choquier et al. also uses an application programming interface to communicate with server portions of

service applications (col. 12, lines 49-67).

As per claim 5, Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

the act of receiving a function call (Fig. 5A, element 502a) using an Application Program Interface comprises the following:

an act of receiving the function call via one or more intermediary modules (Fig. 5A).

As per claim 6, Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

the act of receiving the function call (Fig. 5A, element 502a) via one or more intermediary modules comprises the following: an act of receiving the function call after some restructuring the function call to conform with the Application Program Interface (col. 12, lines 49-67).

As per claim 7, Koizumi discloses the act of identifying an event that will prompt the consistency checking (Fig. 10a, 10b) comprises the following:

Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

an act of receiving a function call (Fig. 5A, element 502a) using the Application Program Interface from the instance (col. 12, lines 49-67) the function call identifying at

least implicitly the event (Fig. 5A).

As per claim 8, Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

the act of receiving a function call (Fig. 5A, element 502a) using an Application Program Interface comprises the following:

an act of receiving the function call via one or more intermediary modules (Fig. 5A).

As per claim 9, Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

the act of receiving the function call (Fig. 5A, element 502a) via one or more intermediary modules comprises the following: an act of receiving the function call after some restructuring the function call to conform with the Application Program Interface (col. 12, lines 49-67).

As per claim 10, Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

the function call identifying the plurality of data fields and the function call identifying the event is the same function call (col. 12, lines 49-67).

As per claim 11, Koizumi discloses identifying an event that will prompt the consistency checking (Fig. 10a, 10b) comprises the following:

Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

an act of receiving a function call (Fig. 5A, element 502a) using the Application Program Interface from the instance (col. 12, lines 49-67) the function call identifying at least implicitly the event (Fig. 5A).

As per claim 20, Koizumi discloses computer program product in accordance with claim 17, wherein the computer-executable instructions for performing the act of identifying a plurality of data fields of state information corresponding to the instance that are to be subject to consistency checking (Fig. 10a, 10b) comprise computer-executable instructions for performing the following:

Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

an act of receiving a function call (Fig. 5A, element 502a) using an Application Program Interface from the instance, the function call identifying at least implicitly the plurality of data fields (col. 12, lines 49-67).

As per claim 21, Koizumi discloses computer-executable instructions for performing the act of identifying an event that will prompt the consistency checking (Fig. 10a, 10b) comprise computer-executable instructions for performing the following:

Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

an act of receiving a function call (Fig. 5A, element 502a) using the Application Program Interface from the instance (col. 12, lines 49-67) the function call identifying at least implicitly the event (Fig. 5A).

As per claim 32, Koizumi discloses in a computing system that includes one or more processors (Fig. 1), and a system memory (Fig. 2, element 405), wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module (Fig. 2, element 403), a method for the instance to control whether or not the system consistency management module performs consistency checking, the method comprising the following:

the instance has found an inconsistency in a plurality of data fields (Figs. 4, 5, 6) representing less than all of the state information corresponding to the instance (Fig. 10a, element 1011)

and in response to receiving the said function call, an act of setting the state information of the instance to reflect that the instance is in recovery mode (Fig 10a, 10b)

Koizumi et al. fails to explicitly disclose an API.

Choquier teaches:

an act of receiving a function call (Fig. 5A, element 502a) using an Application Program Interface from the instance (col. 12, lines 49-67).

Koizumi in view of Choquier fails to explicitly disclose selectively identifying data fields.

McElroy teaches:

selectively identified plurality of data fields, the identified data fields representing less than all of the state information corresponding to the instance (col. 5, lines 33-59) and (col. 4, lines 16-26).

As per claim 33, Koizumi discloses the system consistency management module perform consistency checking (Fig. 10a, 10b) on the plurality of data fields (Figs. 4, 5, 6).

Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

an act of receiving a function call (Fig. 5A, element 502a) using an Application Program Interface from the instance (col. 12, lines 49-67).

As per claim 34, Koizumi discloses an act of identifying an event that will prompt the consistency checking (Fig. 10a, element 1014)

an act of determining that the event has occurred (Fig. 10b, element 1027)

and in response to determining that the event has occurred, an act of performing the consistency checking on the plurality of data fields (Fig. 10b, element 1026).

As per claim 35, Koizumi discloses computer program product of use in a computing system that includes one or more processors (Fig. 1), and a system memory (Fig. 2, element 405), wherein the computing system is capable of using the one or more processors to instantiate in the system memory an instance of an application program and a system consistency management module (Fig. 2, element 403), the computer program product comprising one or more computer-readable media having thereon computer-executable instructions for performing a method for instance to control whether or not the system consistency management module performs consistency checking (Fig. 10a, 10b), the one or more computer-readable media having thereon computer-executable instructions that, when executed by the one or more processors, causes the system consistency management module to perform the method recited in claim 32.

As per claim 36, Koizumi discloses the system consistency management module perform consistency checking (Fig. 10a, 10b) on the plurality of data fields (Figs. 4, 5, 6).

Koizumi in view of McElroy fails to explicitly disclose an API.

Choquier teaches:

the function call is a first function call, and the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, causes the computing system to further perform the

following: an act of receiving a function call (Fig. 5A, element 502a) using an Application Program Interface from the instance (col. 12, lines 49-67).

As per claim 37, Koizumi discloses computer program product in accordance with claim 35, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, causes the computing system to further perform the following:

an act of identifying an event that will prompt the consistency checking (Fig. 10a, element 1014)

an act of determining that the event has occurred (Fig. 10b, element 1027)

and in response to determining that the event has occurred, an act of performing the consistency checking on the plurality of data fields (Fig. 10b, element 1026).

As per claim 38, Koizumi discloses the one or more computer-readable media comprise physical memory media (Fig. 2).

As per claim 39, Koizumi discloses the physical memory media comprises persistent media (Fig. 7).

As per claim 40, Koizumi discloses the physical memory media comprises system memory (Fig 1).

Claims 3, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koizumi et al. (U.S. Patent No. 4,789,986) in view of McElroy et al. (U.S. Patent No. 6,374,364) and in further view of Archibald et al. (U.S. Patent No. 6,928,578).

As per claim 3, Koizumi discloses the act of determining that the plurality of fields (Figs. 4, 5, 6) contains at least one inconsistency comprises the following:

Koizumi in view of McElroy fails to explicitly disclose CRC.

Archibald teaches:

an act of generating one or more cyclic redundancy checking values corresponding to the plurality of data fields (col. 6, lines 59-61)

an act of comparing the one or more generated cyclic redundancy checking values to one or more stored cyclic redundancy checking values corresponding to the plurality of data field (Fig. 3, element 306)

and an act of determining that there is at least one cyclic redundancy checking value that does not match (Fig. 3, element 313).

As per claim 19, Koizumi discloses the computer-executable instructions for performing the act of determining that the plurality of fields contains at least one inconsistency comprise computer-executable instructions for performing the following:

Koizumi in view of McElroy fails to explicitly disclose CRC.

Archibald teaches:

an act of generating one or more cyclic redundancy checking values corresponding to the plurality of data fields (col. 6, lines 59-61)

an act of comparing the one or more generated cyclic redundancy checking values to one or more stored cyclic redundancy checking values corresponding to the plurality of data field (Fig. 3, element 306)

and an act of determining that there is at least one cyclic redundancy checking value that does not match (Fig. 3, element 313).

It would have been obvious to one of ordinary skill in the art at the time the invention to use the method for checking consistency of distributed data of Koizumi et al. in combination with selectable or programmable data consistency checking methodology system of Archibald et al.'s to detect data inconsistencies.

One of ordinary skill in the art at the time the invention would have been motivated to make the combination because Koizumi et al. discloses a method for checking consistency of distributed data by detecting and eliminating inconsistent data in a system (Fig. 2) with each data set having different segments as shown in figures 4-6. Archibald et al. discloses data with different sectors such as a CRC sector (Fig. 2) and (col. 6, lines 59-61).

Response to Arguments

Applicant's arguments have been fully considered with the examiner's response detailed below.

Applicant's arguments see pages 14-16, filed October 31, 2006 with respect to the rejection(s) of claim(s) 1-40 under 35 USC § 102 and 35 USC § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made over Koizumi et al. (U.S. Patent No. 4,789,986) in view of McElroy et al. (U.S. Patent No. 6,374,364) and in further view of Choquier et al. (U.S. Patent No. 5,951,694) and Archibald et al. (U.S. Patent No. 6,928,578). Refer to the corresponding section of the claim analysis for details.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2113

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmira Mehrmanesh whose telephone number is (571) 272-5531. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert W. Beausoliel
EXAMINER
272-3645
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